

Agenda item : F-2.3

38th Argos Operations Committee meeting
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SYSTEM USE

Global system use between April 2003 and April 2004

The number of platforms seen each day and averaged over one month (see Table 1) increased over one year from 5414 in April 2003 to 6127 platforms in April 2004 which represents a **13.2%** increase. This increase is higher than last year (8.7%). The yearly increase averaged over the last three years was **11.8%** and it was **10.9%** over the last six years.

Table 1 gives the breakdown of operating platforms by domain of application and a synthesis by type of system use : Science, Fishing monitoring, sensitive, test.

The number of active platforms, i.e. seen at least once in a month (see table 2) increased during the same period from 9714 to 11619 (**+19.6%**). For “active” platforms, the increase rate is higher this year than for “operating” platforms because there was an important deployment of platforms in humanitarian application (WFP project) which are transmitting only one day per month

Table 2 gives the same breakdown as table 1 but for active platforms.

Figure 1 shows the increase of all Argos platforms over the last fifteen years. The lower curve is the average number of platforms which are seen each day. The upper curve is the total number of “active platforms”. The difference between these two curves has increased regularly since 1988 until June 2000. The ratio which has reached 2 in 2000 has decreased until last year. It is now around 1.9 and increasing again.

Figure 2 shows the increase in each category of system use over the last eight years.

Figure 3 shows the trend of active platforms by type. The tendency is rather stable for moored buoys and mobiles and increasing slightly for drifting buoys. It is increasing more significantly for fishing vessels, animals, ocean subsurface floats and humanitarian operations. It is decreasing for data collection only (fixed stations) and hazmat monitoring.

The number of buoys whose data were sent onto the GTS increased from approximately 740 to more than 920 in May 2004. Concerning operational drifting buoys only, the graph (see figure 4) gives for each country, the total number of buoys

and the number whose data were sent onto the GTS in May 2004. Out of 1685 drifting buoys, 904 are transmitted onto the GTS, i.e. 53%.

Geographical distribution of platforms :

Figure 5 shows the system duty coefficient in reference to the Argos2 on-board equipment capacity. The average system occupation rate has been increasing regularly each year with the number of active platforms in the system. The average system occupation rate is now more than 15 % of the Argos2 capacity. This capacity was defined by the number of Erlangs giving an elementary probability of reception equal to 60% which was considered as acceptable. The maximum system occupation rate is still observed in South America with a peak at about 50% in Peru. The chart was drawn by using data received during 12 hours of one day only (June 8, 2004). A new tool developed by CLS gives directly the occupation rate in erlangs as shown by figure 6. Both are consistent.

Figure 7 shows the ground distribution of active platforms seen in one day of June 2004. For each platform, only the last known position was used to draw the chart.

Table 1 : 2003-2004 Argos “operating” platforms

Operating PTTs (seen daily and averaged monthly)	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY
	2003						2004							
Earth sciences	50	52	53	48	48	50	48	46	41	42	46	43	34	32
Hydrology	394	399	393	409	426	428	424	424	436	437	432	424	422	419
Meteorology	348	352	360	352	354	349	352	360	371	373	370	371	366	350
Oceanography	1647	1654	1671	1664	1684	1719	1778	1757	1687	1741	1733	1752	1763	1861
Wildlife	860	939	938	975	1010	1008	1022	926	667	915	852	884	960	1053
Fishing	1712	1706	1705	1769	1746	1680	1691	1660	1600	1860	1857	2007	2122	2240
Environ. & safety	8	8	8	8	6	6	5	5	9	5	5	14	12	15
Humanitarian		1		2	5	5	7	19	17	14	21	25	31	31
Episodic	27	12	23	25	38	13	18	28	9	18	20	19	31	31
Law enforcement	82	87	91	86	80	78	85	85	80	84	87	92	96	115
Homeland security	180	169	175	172	164	162	162	156	152	151	159	168	180	212
Test	106	132	99	138	106	135	116	104	110	112	88	114	110	114
TOTAL	5414	5511	5516	5648	5667	5633	5708	5570	5179	5752	5670	5913	6127	6473

Science	3299	3396	3415	3448	3522	3554	3624	3513	3202	3508	3433	3474	3545	3715
Fishing	1712	1706	1705	1769	1746	1680	1691	1660	1600	1860	1857	2007	2122	2240
Sensitive	297	277	297	293	293	264	277	293	267	272	292	318	350	404
Test	106	132	99	138	106	135	116	104	110	112	88	114	110	114
TOTAL	5414	5511	5516	5648	5667	5633	5708	5570	5179	5752	5670	5913	6127	6473

Table 2 : 2003-2004 Argos “active” platforms

Active platforms (seen at least once in the month)	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY
	2003												2004	
Earth sciences	75	68	88	74	65	86	77	55	61	61	72	77	42	42
Hydrology	421	419	413	437	443	442	440	439	453	451	447	436	438	444
Meteorology	427	425	436	432	433	446	434	442	452	477	447	465	446	419
Oceanography	3228	3215	3299	3280	3289	3489	3670	3618	3380	3378	3406	3618	3541	3757
Wildlife	2469	2592	2720	2868	2764	2754	2842	2584	2600	2547	2585	2698	2793	2919
Fishing	2191	2205	2224	2278	2538	2295	2223	2084	2353	2498	2393	2891	2853	2871
Environ. & safety	79	97	97	83	27	28	24	27	20	26	29	36	50	31
Humanitarian ops	3	3	3	3	46	55	127	183	181	125	192	490	390	462
Episodic	40	36	56	63	58	29	73	54	22	36	26	48	55	93
Law enforcement	166	166	176	153	142	156	182	186	173	182	197	202	216	258
Homeland security	213	203	209	198	186	183	178	175	171	171	174	188	223	261
Test	402	625	355	696	554	766	445	539	650	510	390	760	572	627
TOTAL	9714	10054	10076	10565	10545	10729	10715	10386	10516	10462	10358	11909	11619	12184

Science	6620	6719	6956	7091	6994	7217	7463	7138	6946	6914	6957	7294	7260	7581
Fishing	2191	2205	2224	2278	2538	2295	2223	2084	2353	2498	2393	2891	2853	2871
Sensitive	501	505	541	500	459	451	584	625	567	540	618	964	934	1105
Test	402	625	355	696	554	766	445	539	650	510	390	760	572	627
TOTAL	9714	10054	10076	10565	10545	10729	10715	10386	10516	10462	10358	11909	11619	12184

Figure 1 : All Argos platforms

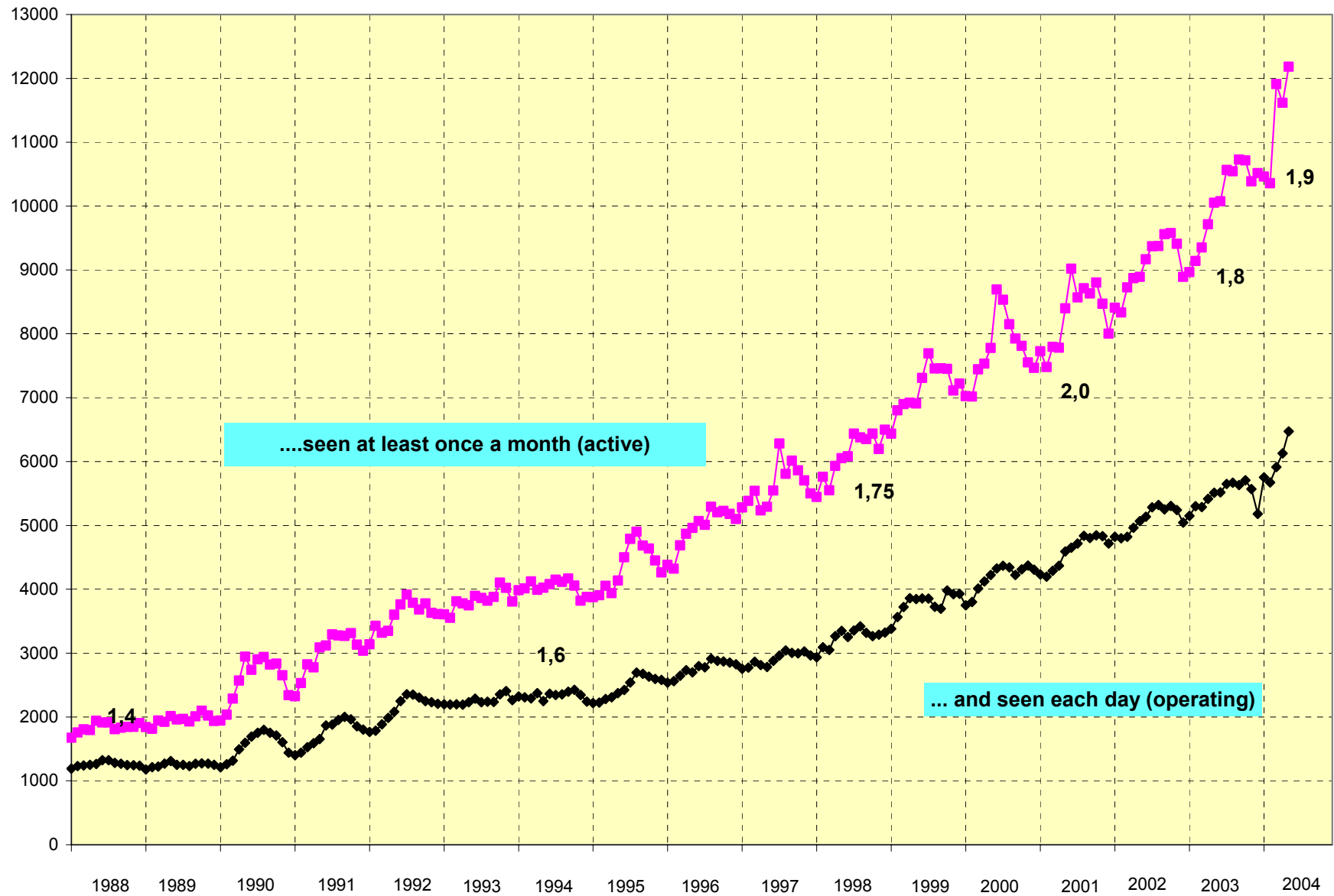


Figure 2 : ACTIVE PLATFORMS PER USE

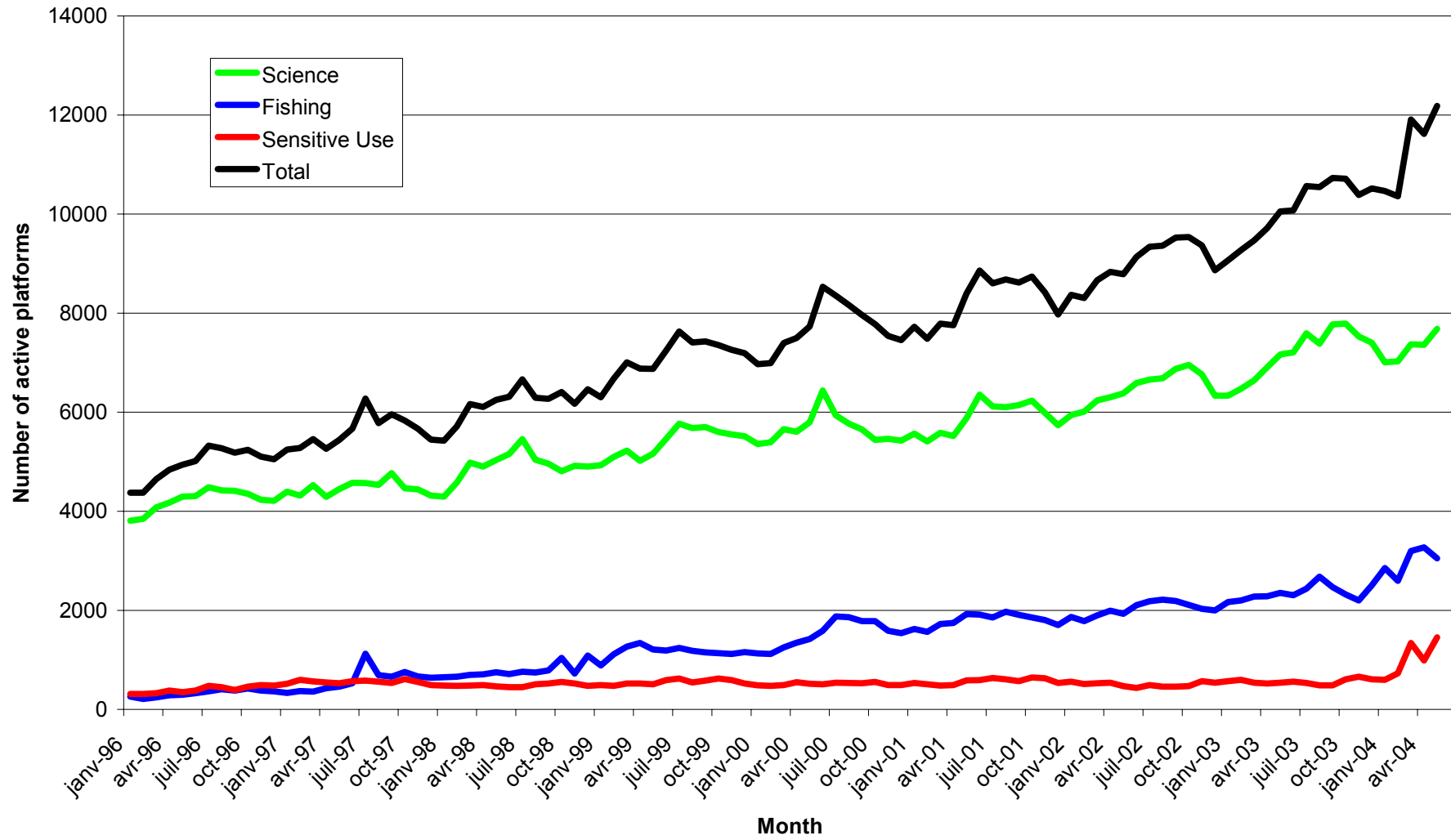


Figure 3 : Active platforms per type

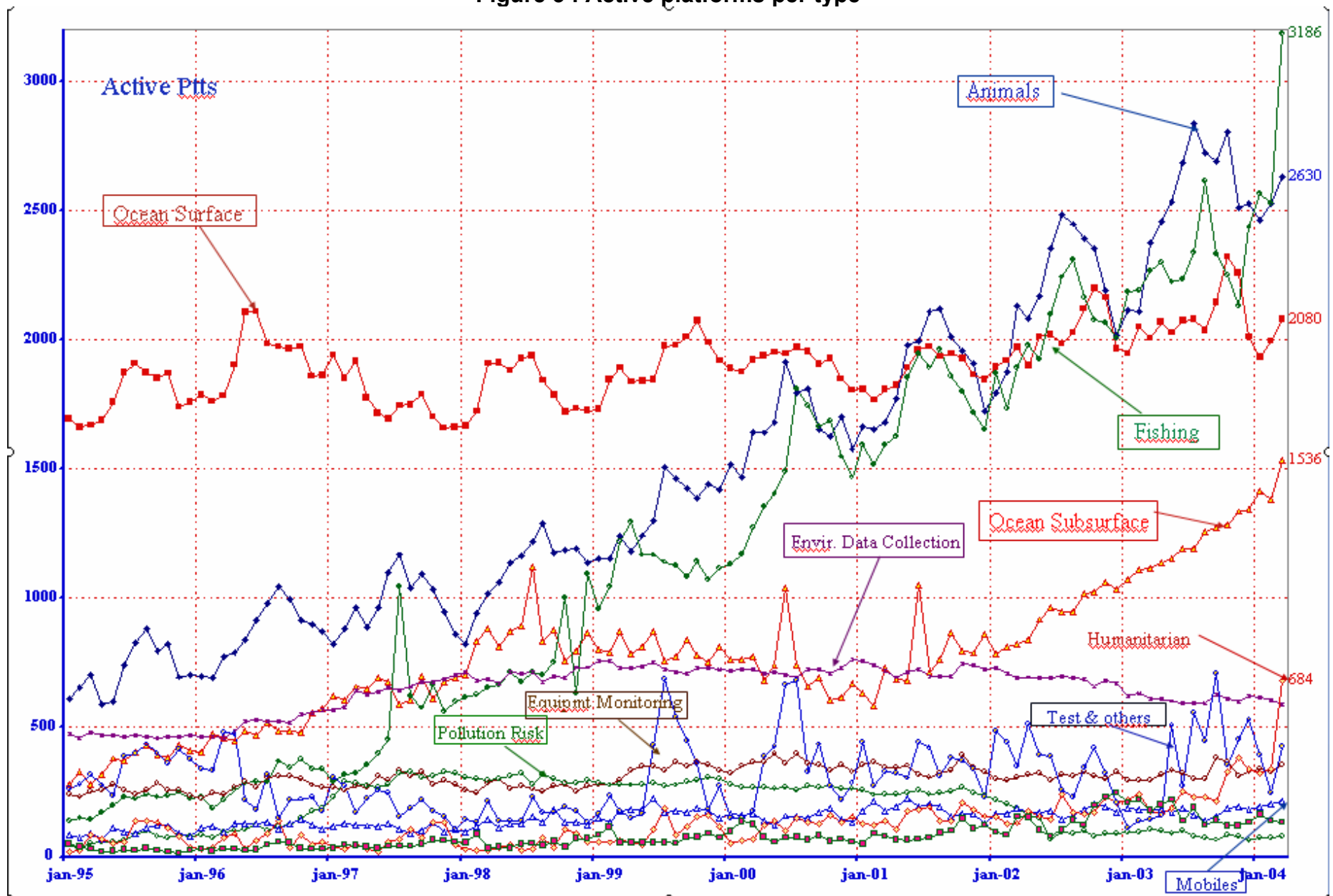
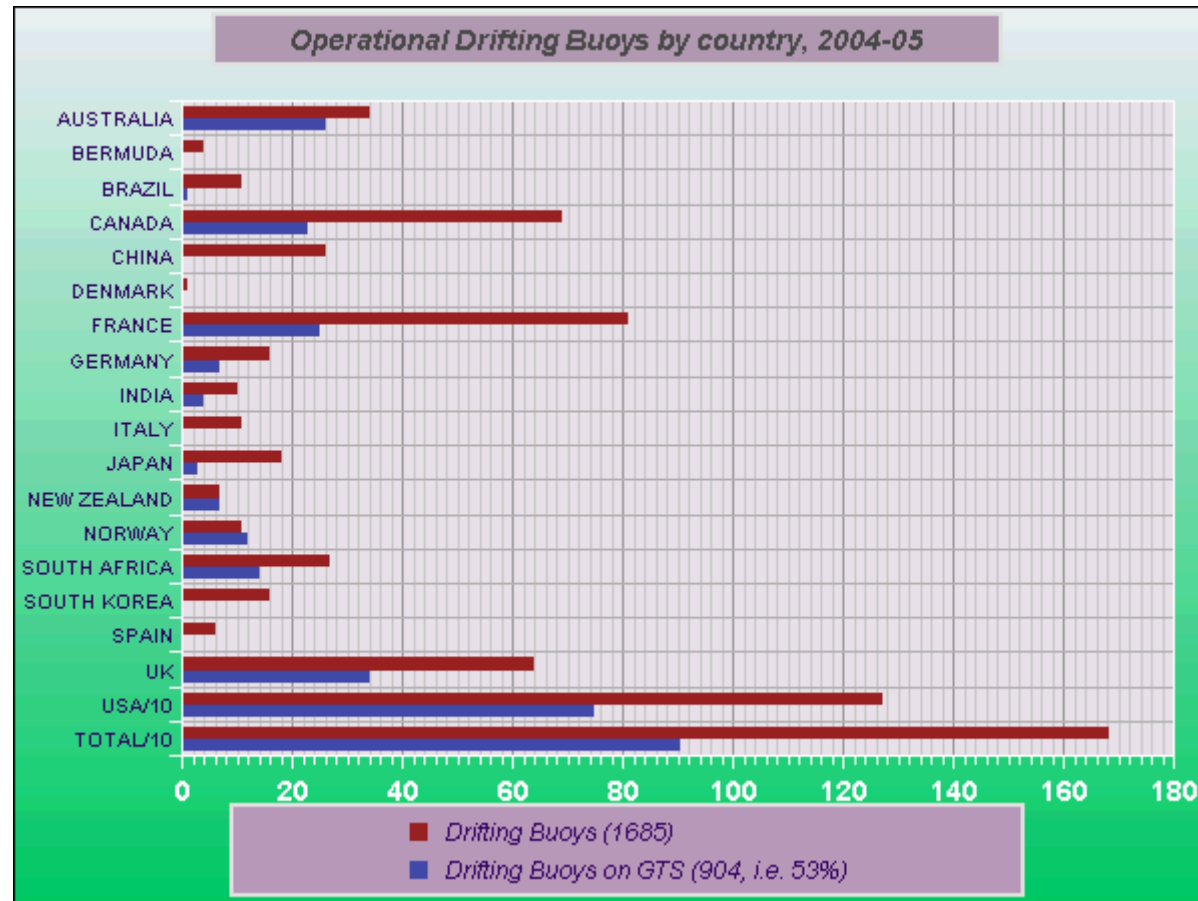


Figure 4 : Operational drifting buoys



NB: Statistics computed from GTS *in situ* marine data provided by Météo France.

Figure 5 : System duty coefficient based on Argos 2 capacity

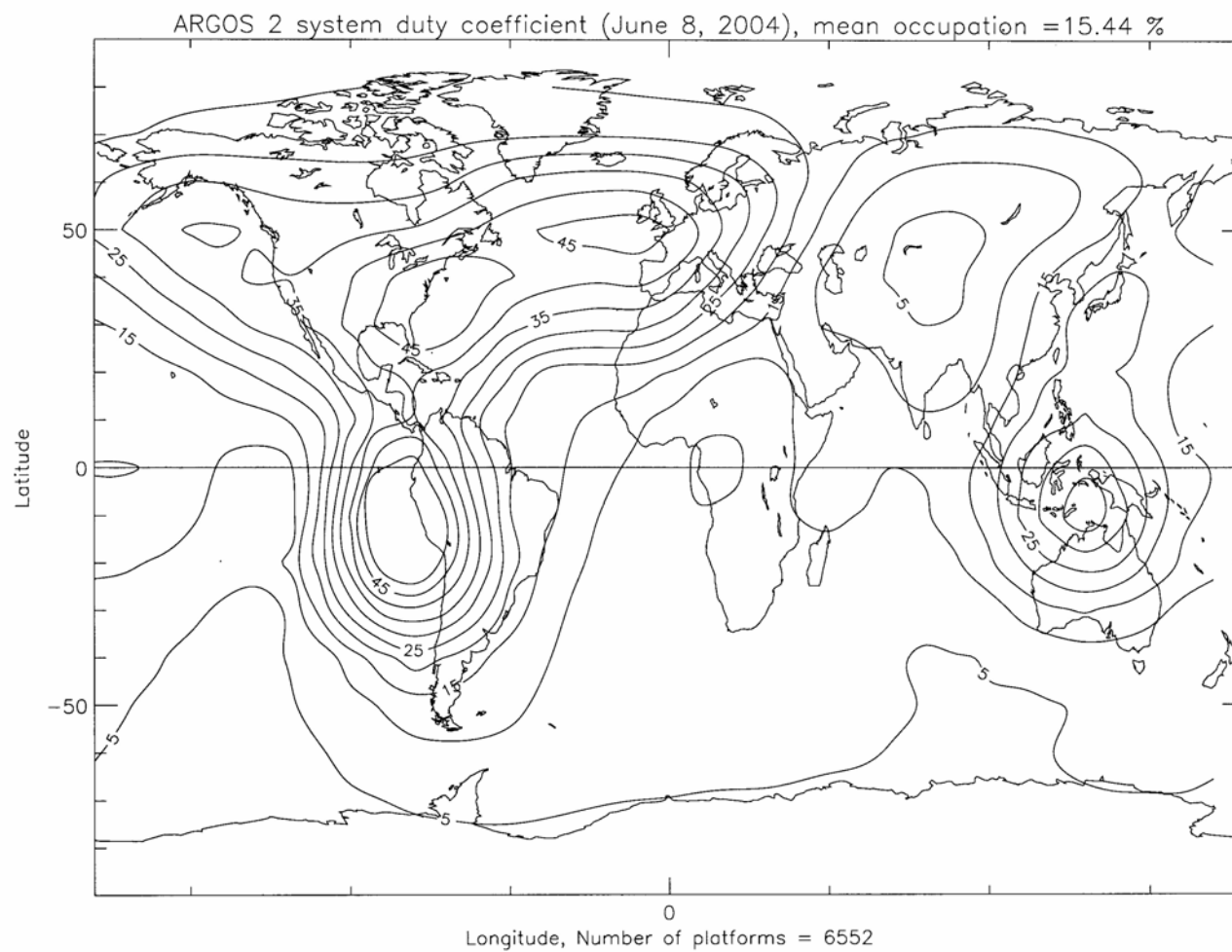


Figure 6: System occupancy in erlangs

System Occupancy 16.12 % (June 9, 2004)

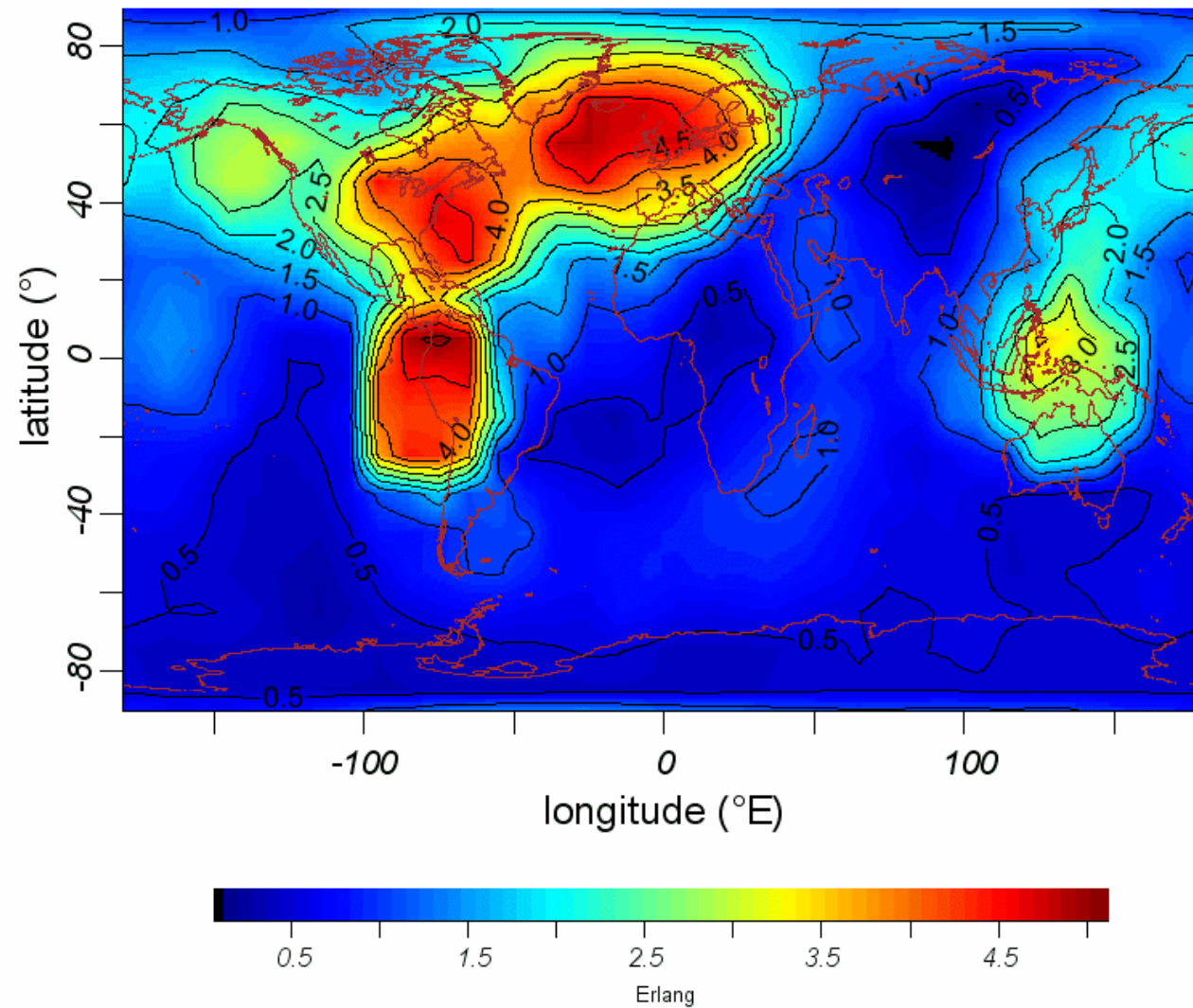


Figure 7 : Ground distribution of active platforms (24 hours)

